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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,598	04/26/2000	Keiji Maeda	Q58920	1083

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2100 Pennsylvania Avenue NW
Washington, DC 20037-3202

EXAMINER

LEE, TIMOTHY L

ART UNIT	PAPER NUMBER
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2697

DATE MAILED: 08/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten signature/initials

Office Action Summary

Application No.

09/558,598

Applicant(s)

MAEDA, KEIJI

Examiner

Timothy Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. The drawings are objected to because in Fig. 11, step C1, the word “cleate” appears like it was mistyped and should actually be “create”. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 5, 8-15, 18, 21-28, 31, and 34-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Peterson et al. (US 5,978,375).
5. Regarding claims 1, 14, and 27, Peterson et al. discloses a telecommunications system that uses ATM and microcells to transfer information. Overall, the system includes a sending entity, a receiving entity, and an ATM link between the two entities. See Fig. 1. The sending entity has means for handling microcells and putting them into the payload of an ATM-cell.

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Likewise, the receiving entity should comprise means to disassemble a microcell. See col. 5, lines 35-64. More specifically, the sending entity includes application functions 806, microcell assemble function 810, and ATM cell assemble function 814, and the receiving entity has similar functions for disassembling the ATM and microcells for the application functions on that side of the communication system. See Fig. 8. Fig. 10 shows an implementation of the microcell assembling function. Arriving user data 808 is put into a FIFO 1010. The ATM connection pointer and the microcell header is fed to the multiplexer which is used to assemble the microcell. See col. 9, lines 24-57. As shown in the figure, the user data 808 enters the microcell assembling function in a serial fashion, where the user data 808 can be thought of as the "plurality of packets" (transferring a plurality of packets in a serial manner). The microcells can be thought of as "transfer packets" (a packet creating section for collecting said plurality of packets transferred in said serial manner to create a transfer packet). Fig. 13 shows an embodiment of the ATM cell assembling function 814. After the microcells have been assembled, they arrive at the ATM-cell assembling function to be assembled into ATM cells. The microcell is temporarily stored in one of a number of FIFO's, one for each ATM connection. When the number of microcells stored in the FIFO's 1306 for the connection is sufficient to fill the ATM cell payload according to the selected method, the ATM-cell is assembled and sent to a FIFO 1322. The ATM cell is then sent onto the ATM link for communication to the receiving device. See col. 10, line 45-col.11, line 23. By putting the microcell into ATM cell format, a protocol conversion occurs (a cell sending section for converting said transfer packets created by said packet creating section into a cell able to be sent onto a predetermined communication network and then sending cell onto said predetermined communication network). After traveling

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over the ATM link, the ATM cell enters the ATM-cell disassembling function and microcell disassembling function. See also Fig. 16. The multiplexer 1714 supports most of the disassembly functions. It has two basic functions, one being to extract the ATM header and microcell headers respectively, when they are read from the FIFO 1714 and pass the microcell user data along to a demultiplexer 1716. Once the microcell 1732 has reached the end of the disassembling and demultiplexing process, the microcell goes through microcell disassembling process 822, and the output from each functional entity is user data 824 which is presented to the application functionality 826. See col. 14, line 8-col. 16, line 13. The ATM cell disassembling function can be considered a "packet reconfiguring section" and the microcell disassembling function can be considered "a packet dividing/transferring section" because it divides the microcells so that it is presentable to the application function.

6. Regarding claims 2, 5, 15, 18, 28 and 31, the microcell assemble function is able to receive data on a time division multiplex basis. See col. 8, lines 49-57. Likewise, data can be passed onto the receiving end in the same manner. Time division multiplexing works on a cycle basis (transferred in a serial manner every first time lapse).

7. Regarding claims 8, 10, 21, 23, 34, and 36, Peterson et al. discloses a virtual channel identifier found in the ATM header. The VCI is used for identifying the virtual channel that the ATM cell will travel (communication network is configured from one virtual channel). See col. 4, lines 37-45.

8. Regarding claims 9, 22, and 35, as mentioned previously, the applications functions on the receiving and the transmitting ends are serially connected to the microcell assembling/disassembly functions as seen in Figs. 13 and 17.

9. Regarding claims 11, 24, and 37, the VP/VC identifying the ATM connection is used to address the relevant position 1724 in the ATM table as indicated by dashed arrow 1722. See Fig. 17. Fig. 17 shows the ATM cell disassembly and microcell disassembly in detail, so the information on virtual channels is forwarded to the receiving units that are responsible for the disassembly. See col. 5, lines 19-41
10. Regarding claims 12, 25, and 38, Peterson et al. discloses that the multiplexer 1714 uses the table information of virtual channels in transferring the microcells, and thus user data, to the proper destinations. See col. 15, lines 34-65.
11. Regarding claims 13, 26, and 39, as shown in Fig. 8, the sending entity and the receiving entity rely on different buses and are only connected through the ATM link. See Fig. 8.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 3, 4, 16, 17, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson et al. in view of Murakami (US 6,084,889), in light of the rejection to claim 1. Peterson et al. does not expressly disclose using time stamps in the packets. Murakami discloses inserting time stamps into ATM cells, and then on the output, to use the time stamps in demultiplexing. See at least col. 3, line 44-col. 4, lines 61. It would have been obvious to a person of ordinary skill in the art at the time of the invention to place timestamps in the

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microcells of Peterson et al., and to use these time stamps in the disassembling process. One would have been motivated to do this because it allows the microcells to be outputted in the same order that they were inputted, which is important in time sensitive applications like video and voice.

14. Claims 6, 7, 19, 20, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson et al. in view of Laubach et al. (US 6,081,533). Peterson et al. does not expressly disclose where the user data is of IEEE 1394 format, both on the input and the output. Laubach et al. discloses converting 1394 formatted data into ATM packets for transmission over an ATM network. See col. 15, line 47-col. 16, lines 25. Also, it is inherent in 1394 that the packets are isochronous—it is part of the 1394 standard. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use 1394 formatted data as the user data in Peterson et al.. One would have been motivated to do this because in a home network environment, to send from device to another, sometimes it is helpful to convert the data format to ATM so that other machines can read the data. See cited section above for additional motivation.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Westburg (US 6,041,054), Peterson et al. (US 5,822,321), and Gupta et al. (US 5,799,017) disclose packing data into cells and sending them over a different protocol.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703)305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

TLL


JOHN PEZZLO
PRIMARY EXAMINER